

RECEIVED

SEP 24 2002

TECH CENTER 1600/2900



1600

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/09/620,561

TIME: 11:01:09

Input Set : A:\09-620,561 sequence listing.txt

Output Set: N:\CRF4\09182002\I620561.raw

ENTERED

```

4 <110> APPLICANT: Kiefer, Michael C.
5   Valenzuela, Pablo D.T.
6   Barr, Philip J.
8 <120> TITLE OF INVENTION: Expression and Use of Human Fibroblast
9   Growth Factor Receptor
12 <130> FILE REFERENCE: 022441.00001
14 <140> CURRENT APPLICATION NUMBER: US 09/620,561
15 <141> CURRENT FILING DATE: 2000-07-20
17 <150> PRIOR APPLICATION NUMBER: US 08/479,992
18 <151> PRIOR FILING DATE: 1995-05-12
20 <150> PRIOR APPLICATION NUMBER: US 08/315,686
21 <151> PRIOR FILING DATE: 1994-09-30
23 <150> PRIOR APPLICATION NUMBER: US 08/046,020
24 <151> PRIOR FILING DATE: 1993-04-12
26 <150> PRIOR APPLICATION NUMBER: US 07/640,029
27 <151> PRIOR FILING DATE: 1991-01-11
29 <160> NUMBER OF SEQ ID NOS: 12
31 <170> SOFTWARE: FastSEQ for Windows Version 4.0
33 <210> SEQ ID NO: 1
34 <211> LENGTH: 820
35 <212> TYPE: PRT
36 <213> ORGANISM: Homo sapiens
38 <400> SEQUENCE: 1
39 Met Trp Ser Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala
40 1           5           10          15
41 Thr Leu Cys Thr Ala Arg Pro Ser Pro Thr Leu Pro Glu Gln Ala Gln
42           20           25           30
43 Pro Trp Gly Ala Pro Val Glu Val Glu Ser Phe Leu Val His Pro Gly
44           35           40           45
45 Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
46           50           55           60
47 Asn Trp Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg
48 65           70           75           80
49 Ile Thr Gly Glu Glu Val Glu Val Gln Asp Ser Val Pro Ala Asp Ser
50           85           90           95
51 Gly Leu Tyr Ala Cys Val Thr Ser Ser Pro Ser Gly Lys Asp Thr Thr
52           100          105          110
53 Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
54           115          120          125
55 Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
56           130          135          140
57 Lys Pro Asn Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys Met Glu
58 145          150          155          160

```

## RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/09/620,561

TIME: 11:01:09

Input Set : A:\09-620,561 sequence listing.txt

Output Set: N:\CRF4\09182002\I620561.raw

```

59 Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe Lys Cys
60      165      170      175
61 Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys Asn Gly
62      180      185      190
63 Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val Arg Tyr
64      195      200      205
65 Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp Lys Gly
66      210      215      220
67 Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn His Thr
68 225      230      235      240
69 Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile Leu Gln
70      245      250      255
71 Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn Val Glu
72      260      265      270
73 Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln Trp Leu
74      275      280      285
75 Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn Leu Pro
76      290      295      300
77 Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp Lys Glu
78 305      310      315      320
79 Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala Gly Glu
80      325      330      335
81 Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His Ser Ala
82      340      345      350
83 Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val Met Thr
84      355      360      365
85 Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala Phe Leu
86      370      375      380
87 Ile Ser Cys Met Val Gly Ser Val Ile Val Tyr Lys Met Lys Ser Gly
88 385      390      395      400
89 Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys Leu Ala
90      405      410      415
91 Lys Ser Ile Pro Leu Arg Arg Gln Val Thr Val Ser Ala Asp Ser Ser
92      420      425      430
93 Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg Leu Ser
94      435      440      445
95 Ser Ser Gly Thr Pro Met Leu Ala Gly Val Ser Glu Tyr Glu Leu Pro
96      450      455      460
97 Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys
98 465      470      475      480
99 Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu Ala Ile
100      485      490      495
101 Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys
102      500      505      510
103 Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser
104      515      520      525
105 Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn
106      530      535      540
107 Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu

```

## RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/09/620,561

TIME: 11:01:09

Input Set : A:\09-620,561 sequence listing.txt

Output Set: N:\CRF4\09182002\I620561.raw

```

108 545          550          555          560
109 Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro
110          565          570          575
111 Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu Glu Gln
112          580          585          590
113 Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly
114          595          600          605
115 Met Glu Tyr Leu Ala Ser Lys Cys Ile His Arg Asp Leu Ala Ala
116          610          615          620
117 Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe
118 625          630          635          640
119 Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr
120          645          650          655
121 Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp
122          660          665          670
123 Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu
124          675          680          685
125 Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val
126          690          695          700
127 Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro
128 705          710          715          720
129 Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys Trp His
130          725          730          735
131 Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu
132          740          745          750
133 Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu Tyr Leu Asp Leu Ser
134          755          760          765
135 Met Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg Ser Ser
136          770          775          780
137 Thr Cys Ser Ser Gly Glu Asp Ser Val Phe Ser His Glu Pro Leu Pro
138 785          790          795          800
139 Glu Glu Pro Cys Leu Pro Arg His Pro Ala Gln Leu Ala Asn Gly Gly
140          805          810          815
141 Leu Lys Arg Arg
142          820
144 <210> SEQ ID NO: 2
145 <211> LENGTH: 822
146 <212> TYPE: PRT
147 <213> ORGANISM: Homo sapiens
149 <400> SEQUENCE: 2
150 Met Trp Ser Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala
151 1          5          10          15
152 Thr Leu Cys Thr Ala Arg Pro Ser Pro Thr Leu Pro Glu Gln Ala Gln
153          20          25          30
154 Pro Trp Gly Ala Pro Val Glu Val Glu Ser Phe Leu Val His Pro Gly
155          35          40          45
156 Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
157          50          55          60
158 Asn Trp Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg

```

## RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/09/620,561

TIME: 11:01:09

Input Set : A:\09-620,561 sequence listing.txt

Output Set: N:\CRF4\09182002\I620561.raw

159	65					70				75				80		
160	Ile	Thr	Gly	Glu	Glu	Val	Glu	Val	Gln	Asp	Ser	Val	Pro	Ala	Asp	Ser
161					85					90					95	
162	Gly	Leu	Tyr	Ala	Cys	Val	Thr	Ser	Ser	Pro	Ser	Gly	Ser	Asp	Thr	Thr
163				100					105					110		
164	Tyr	Phe	Ser	Val	Asn	Val	Ser	Asp	Ala	Leu	Pro	Ser	Ser	Glu	Asp	Asp
165			115					120					125			
166	Asp	Asp	Asp	Asp	Asp	Ser	Ser	Ser	Glu	Glu	Lys	Glu	Thr	Asp	Asn	Thr
167		130					135					140				
168	Lys	Pro	Asn	Arg	Met	Pro	Val	Ala	Pro	Tyr	Trp	Thr	Ser	Pro	Glu	Lys
169	145					150				155					160	
170	Met	Glu	Lys	Lys	Leu	His	Ala	Val	Pro	Ala	Ala	Lys	Thr	Val	Lys	Phe
171				165						170					175	
172	Lys	Cys	Pro	Ser	Ser	Gly	Thr	Pro	Asn	Pro	Thr	Leu	Arg	Trp	Leu	Lys
173			180						185				190			
174	Asn	Gly	Lys	Glu	Phe	Lys	Pro	Asp	His	Arg	Ile	Gly	Gly	Tyr	Lys	Val
175			195					200					205			
176	Arg	Tyr	Ala	Thr	Trp	Ser	Ile	Ile	Met	Asp	Ser	Val	Val	Pro	Ser	Asp
177		210					215					220				
178	Lys	Gly	Asn	Tyr	Thr	Cys	Ile	Val	Glu	Asn	Glu	Tyr	Gly	Ser	Ile	Asn
179	225					230				235					240	
180	His	Thr	Tyr	Gln	Leu	Asp	Val	Val	Glu	Arg	Ser	Pro	His	Arg	Pro	Ile
181				245						250					255	
182	Leu	Gln	Ala	Gly	Leu	Pro	Ala	Asn	Lys	Thr	Val	Ala	Leu	Gly	Ser	Asn
183			260						265				270			
184	Val	Glu	Phe	Met	Cys	Lys	Val	Tyr	Ser	Asp	Pro	Gln	Pro	His	Ile	Gln
185			275					280				285				
186	Trp	Leu	Lys	His	Ile	Glu	Val	Asn	Gly	Ser	Lys	Ile	Gly	Pro	Asp	Asn
187		290					295					300				
188	Leu	Pro	Tyr	Val	Gln	Ile	Leu	Lys	Thr	Ala	Gly	Val	Asn	Thr	Thr	Asp
189	305					310				315					320	
190	Lys	Glu	Met	Glu	Val	Leu	His	Leu	Arg	Asn	Val	Ser	Phe	Glu	Asp	Ala
191				325						330				335		
192	Gly	Glu	Tyr	Thr	Cys	Leu	Ala	Gly	Asn	Ser	Ile	Gly	Leu	Ser	His	His
193				340					345				350			
194	Ser	Ala	Trp	Leu	Thr	Val	Leu	Glu	Ala	Leu	Glu	Glu	Arg	Pro	Ala	Val
195			355						360				365			
196	Met	Thr	Ser	Pro	Leu	Tyr	Leu	Glu	Ile	Ile	Ile	Tyr	Cys	Thr	Gly	Ala
197		370					375					380				
198	Phe	Leu	Ile	Ser	Cys	Met	Val	Gly	Ser	Val	Ile	Val	Tyr	Lys	Met	Lys
199	385					390				395					400	
200	Ser	Gly	Thr	Lys	Lys	Ser	Asp	Phe	His	Ser	Gln	Met	Ala	Val	His	Lys
201				405						410				415		
202	Leu	Ala	Lys	Ser	Ile	Pro	Leu	Arg	Arg	Gln	Val	Thr	Val	Ser	Ala	Asp
203				420					425				430			
204	Ser	Ser	Ala	Ser	Met	Asn	Ser	Gly	Val	Leu	Leu	Val	Arg	Pro	Ser	Arg
205			435					440					445			
206	Leu	Ser	Ser	Ser	Gly	Thr	Pro	Met	Leu	Ala	Gly	Val	Ser	Glu	Tyr	Glu
207		450					455					460				

## RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/09/620,561

TIME: 11:01:09

Input Set : A:\09-620,561 sequence listing.txt

Output Set: N:\CRF4\09182002\I620561.raw

```

208 Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
209 465                               470                               475                               480
210 Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
211                               485                               490                               495
212 Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
213                               500                               505                               510
214 Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
215                               515                               520                               525
216 Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
217                               530                               535                               540
218 Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
219 545                               550                               555                               560
220 Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
221                               565                               570                               575
222 Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
223                               580                               585                               590
224 Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
225                               595                               600                               605
226 Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
227                               610                               615                               620
228 Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
229 625                               630                               635                               640
230 Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
231                               645                               650                               655
232 Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
233                               660                               665                               670
234 Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
235                               675                               680                               685
236 Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
237                               690                               695                               700
238 Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
239 705                               710                               715                               720
240 Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
241                               725                               730                               735
242 Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
243                               740                               745                               750
244 Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu Tyr Leu Asp
245                               755                               760                               765
246 Leu Ser Met Pro Leu Asp Gln Tyr Ser Pro Ser Phe Pro Asp Thr Arg
247                               770                               775                               780
248 Ser Ser Thr Cys Ser Ser Gly Glu Asp Ser Val Phe Ser His Glu Pro
249 785                               790                               795                               800
250 Leu Pro Glu Glu Pro Cys Leu Pro Arg His Pro Ala Gln Leu Ala Asn
251                               805                               810                               815
252 Arg Gly Leu Lys Arg Arg
253                               820
255 <210> SEQ ID NO: 3
256 <211> LENGTH: 731
257 <212> TYPE: PRT

```

VERIFICATION SUMMARY

DATE: 09/18/2002

PATENT APPLICATION: US/09/620,561

TIME: 11:01:10

Input Set : A:\09-620,561 sequence listing.txt

Output Set: N:\CRF4\09182002\I620561.raw